MARITIME HERITAGE MINNESOTA

MHM IS A 501(c)(3) NON-PROFIT CORPORATION DEDICATED TO THE DOCUMENTATION, CONSERVATION, AND PRESERVATION OF MINNESOTA'S FINITE MARITIME CULTURAL RESOURCES

Ann Merriman
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Minnesota Archaeology License 25-20

Lake Minnetonka Nautical Archaeology Project Series 13

Lake Minnetonka Underwater Archaeology Project 13 Report

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Acknowledgments

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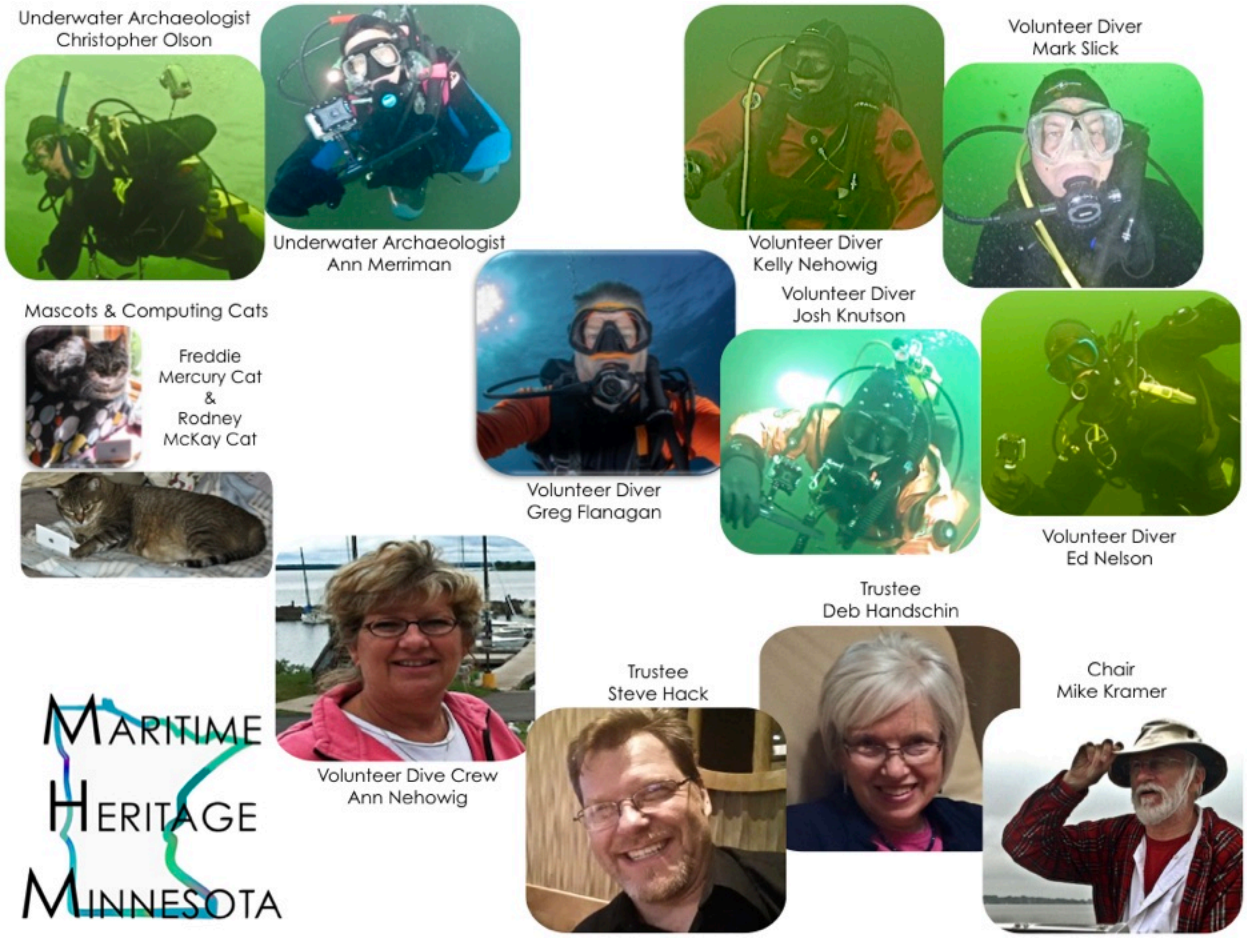
All underwater images in this report derived from video recorded by Josh Knutson and Kelly Nehowig.



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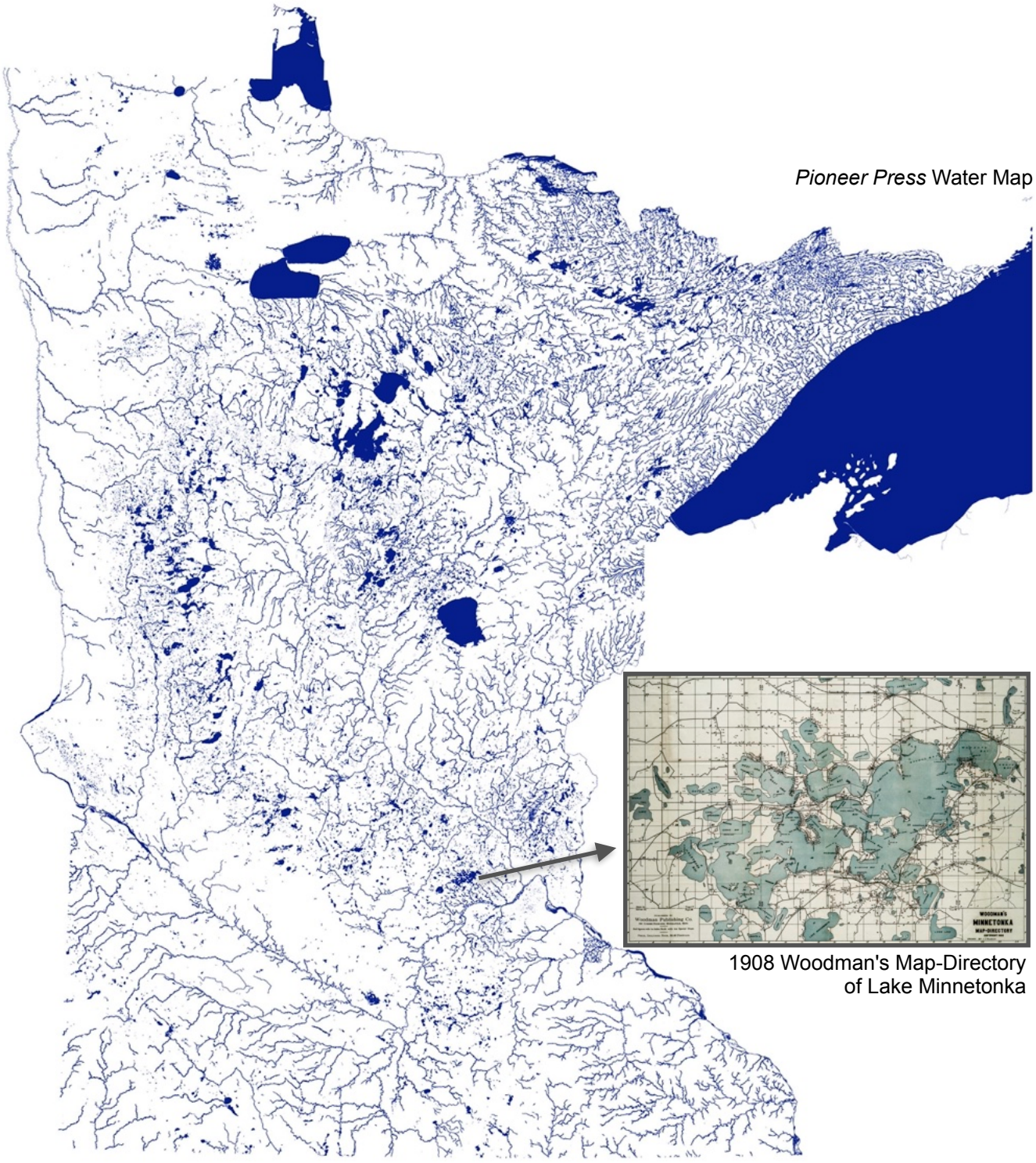
"A small St. Paul-based nonprofit, Maritime Heritage Minnesota (MHM), re-establish[ed] the discipline of underwater archaeology in Minnesota....MHM...conducts groundbreaking nautical archeological and maritime historical research."

~Steve Elliott, Former Minnesota Historical Society CEO and Director, January 2015

Introduction

Wrecks and the artifacts associated with them tell a story. Removing or otherwise disturbing artifacts, treating them as commodities that can be sold, obliterates that story. Nautical archaeological and maritime sites are finite, and are significant submerged cultural resources. Nautical, maritime, underwater, maritime terrestrial – Maritime Heritage Minnesota's (MHM) deals with all of these types of sites throughout the State of Minnesota. MHM's Mission is to document, conserve, preserve, and when necessary, excavate these finite cultural resources where the welfare of the artifact is paramount. MHM is concerned with protecting our underwater and maritime sites – our shared Maritime History – for their own benefit in order for all Minnesotans to gain the knowledge that can be obtained through their study. MHM's study of wrecks does not include the removal of artifacts or damaging the sites in any way. MHM does not raise wrecks or 'hunt' for 'treasure'. Submerged archaeological sites in Minnesota are subject to the same State statues as terrestrial sites: the Minnesota Field Archaeology Act (1963), Minnesota Historic Sites Act (1965), the Minnesota Historic District Act (1971), and the Minnesota Private Cemeteries Act (1976) if human remains are associated with a submerged site. Further, the case of *State v. Bollenbach* (1954) and the Federal Abandoned Shipwrecks Act of 1987 provide additional jurisdictional considerations when determining State oversight and "ownership" of resources defined by law as archaeological sites (Marken, Ollendorf, Nunnally, and Anfinson 1997, 3-4). Therefore, just like terrestrial archaeologists working for the State, universities, or with contract firms, underwater archaeologists are required to have the necessary education, appropriate credentials, and hold valid licenses from the Office of the State Archaeologist (OSA).

MHM completed a side and down-imaging sonar survey of Lake Minnetonka in 2011-2012, and a second survey of the entire lake utilizing significantly improved technology is nearly complete. Additionally, MHM conducts targeted sonar recordings in order to produce images with more clarity and to refine location coordinates. Prior to the beginning of MHM's work, there was one recognized nautical archaeological site - the *White Bear* Wreck - in Lake Minnetonka and another five wrecks were known by the OSA. Now, after MHM's work between 2012-2025, there are 96 known wrecks and dozens of maritime sites and other objects documented on the lake bottom. Not all the wrecks or maritime sites have Minnesota Archaeological Site Numbers at this time, but eventually all the wrecks will qualify for site status. MHM has also conducted Phase II maritime terrestrial fieldwork on Big Island (21-HE-402), a Phase II underwater documentation of the Unfinished Dakota Dugout Canoe Wreck (21-HE-557), and has successfully nominated the Wayzata Bay Wreck to the National Register of Historic Places (Merriman and Olson, 2025, 2024, 2022a-b, 2019a-b, 2018, 2017, 2016, 2015a-d, 2014, 2013a-b, 2012a-b). Regardless, all wrecks in public waters are protected by the State of Minnesota and the Abandoned Shipwrecks Act.



Pioneer Press Water Map

1908 Woodman's Map-Directory
of Lake Minnetonka

Preface

The Lake Minnetonka Underwater Archaeology Project 13 began in early July 2025 and concluded in late August. The purpose of the project was to conduct additional sonar survey of specific areas of the lake to produce additional images of previously recognized anomalies and possibly record more accurate GPS coordinates. MHM dove on targets using SCUBA, shot video and used photography, took measurements and created drawings when appropriate to answer questions about anomalies on the lake bottom. MHM conducted targeted sonar scanning in July and SCUBA reconnaissance in July and August on 8 unknown anomalies and 2 known wrecks.

Results of the Lake Minnetonka Underwater Archaeology Project 13 (LMUA-13) Minnesota Archaeology License 25-20

Methodology

The methodology used to identify and rudimentarily document underwater archaeological anomalies is straightforward. MHM used the GPS coordinates of a wreck or an anomaly - taken from the data imbedded in the sonar data - to drop a weighted diver down buoy near the target. The dive boat anchored a short distance away from the buoy and divers geared up for the dive. At any given time, there were two or three divers underwater. If the buoy anchor weight landed near and sometimes on the anomaly or wreck, no search for the target was conducted. However, for a variety of reasons, a brief search for the target was conducted until it was located or it was determined that the anomaly was a false sonar return. If a cultural or natural resource was located, the divers photographed and recorded video of the site or object, logged its basic measurements, and examined any obvious attributes. The 8 anomalies examined using SCUBA during the LMUA-13 Project were A373, A811, A1009, A1064, A1138, A1144, A1145, and A1148. MHM also conducted site assessments on the *Priscilla* Wreck (21-HE-404) and the Wayzata Bay Wreck (21-HE-401).

Results

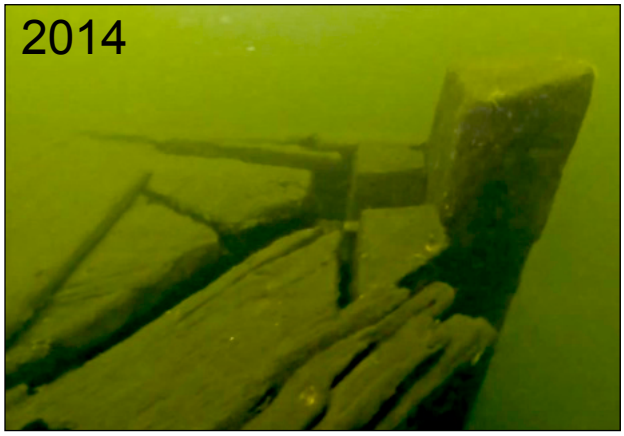
No new wrecks were identified during the LMUA-13 Project, primarily due to prolific weed growth in shallow areas early in the season and persisting throughout the summer. Weeds were so thick, the bottom of the lake could not be reached in areas where A1138, A1144, A1145, and A1148 are located. Two unknown dive targets proved to be cultural resources - Anomaly 373 and Anomaly 1009 - and decent visibility allowed MHM to conduct site assessments on the *Priscilla* Wreck and Wayzata Bay Wreck. One goal was to collect enough clear video to produce photogrammetric models of each wreck. Unfortunately, while the visibility on the wrecks was sufficient for an assessment, it was not good enough to produce photogrammetric models.

Wayzata Bay Wreck (21-HE-401) and *Priscilla* Wreck (21-HE-404)

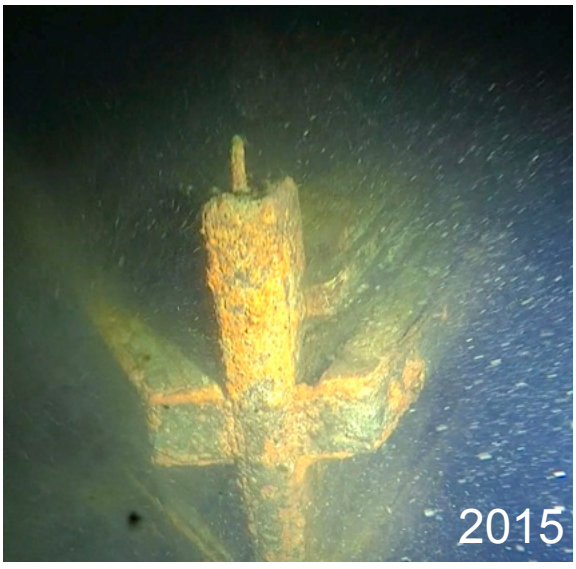
The 2025 assessment of the Wayzata Bay Wreck and *Priscilla* Wreck indicated that neither wreck has experienced significant changes since MHM's last assessments in

2014 and 2015 respectively (Merriman and Olson 2014, 38; 2015a; 2015b, 4-5, 12-13). Other wrecks such as the gasoline launch *Theta* Wreck (21-HE-514), the Homebuilt Wood and Steel Composite Wreck (21-HE-562), and the Large Wineglass Stern Wreck (21-HE-573) that are located in shallow water in Lake Minnetonka have undergone drastic damaging changes. These three wrecks have sustained extreme damage from wake boats and anchor drags. The downward rush of water from wake boats is violent and has literally blown apart underwater archaeological sites in Minnesota's lakes. MHM initially documented *Theta* in 2018 and returned to the wreck in 2023. In that time, the site went from 75% intact to 25% intact after 5 years of wake boat action tearing her apart (Merriman and Olson 2024, 24-25). The starboard quarter of 21-HE-562 was intact when MHM initially documented the site in late June 2021; by early August 2021, the starboard quarter had separated from the transom and the gunwale had sprung loose. Additionally, most of the zebra mussels had blown off the wreck by the force of the wake boat passing overhead (Merriman and Olson 2022, 14-18). Anchor drags across submerged cultural resources likely happens daily, and if a shallow wreck or site is not engulfed in weeds or at least , anchors can cause significant damage as they have done on 21-HE-573 since MHM documented the wreck in August 2023 (Kelly Nehowig, personal communication,October 2024).

Wayzata Bay Wreck (21-HE-401)

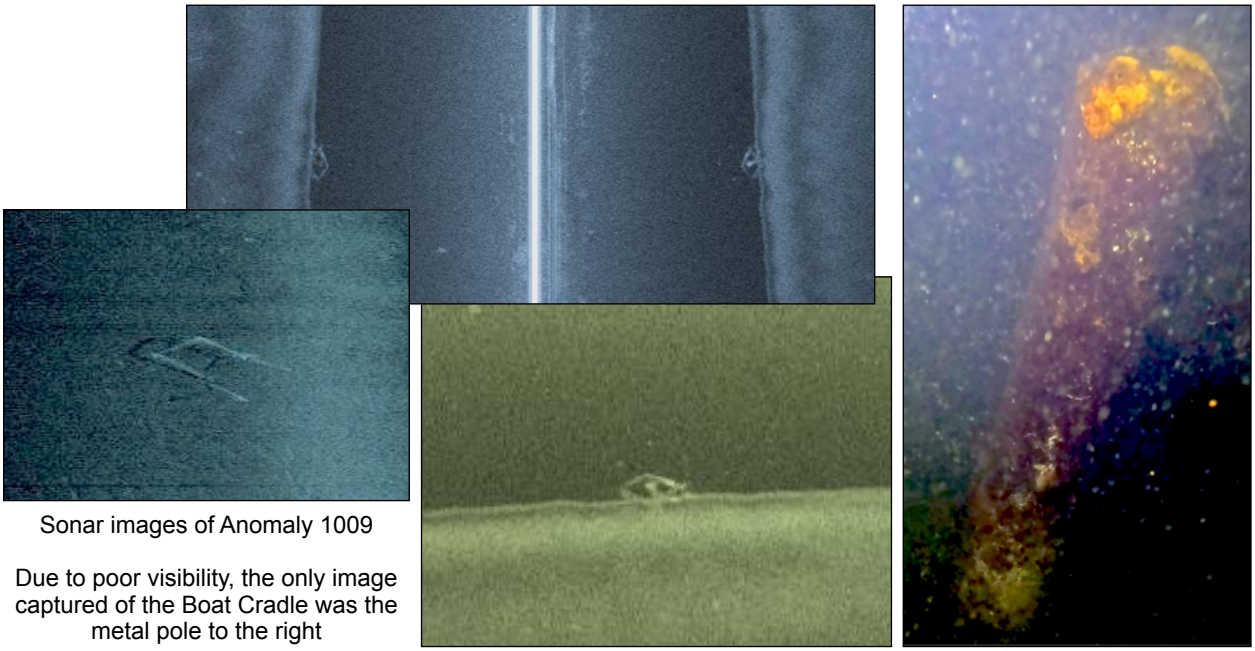


Priscilla Wreck (21-HE-404)



Boat Cradle (Anomaly 1009)

The acoustical signature of Anomaly 1009 did not appear to be a wreck, but the sonar image was strong and defined, indicating it was a cultural resource. During SCUBA reconnaissance, A1009 was located and it is a metal boat cradle. Unlike the majority of this type of maritime resource, A1009 is just the cradle portion of a boat lift apparatus with no lifting mechanism or canopy frame present. There are five identified boat lifts (A7, A88, A96.1, A269, A622) and four identified canopy frames (A85, A97, A110, A721) on the bottom of Lake Minnetonka (Merriman and Olson 2015b, 23-24; 2015c, 28; 2016, 43; 2017, 38-39; 2018, 30). Anomaly 1009 is 10.50 feet long and 7.50 feet wide.



Sonar images of Anomaly 1009

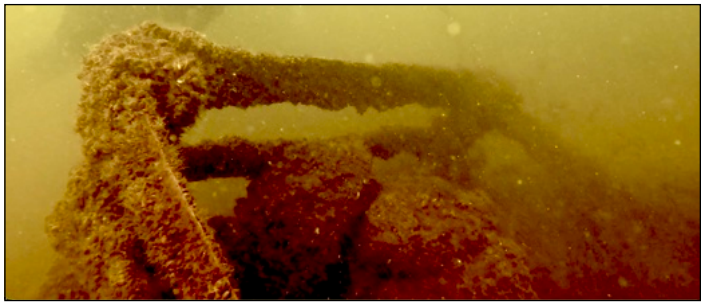
Due to poor visibility, the only image captured of the Boat Cradle was the metal pole to the right

Rock Box (Anomaly 373)

The acoustical signature of Anomaly 373 suggested it might be some form of maritime infrastructure. MHM determined that A373 is an artificially created fishing spot similar to the Fish Cribs Site (Anomaly 692) in Upper Lake Minnetonka (Merriman and Olson 2017, 40). Anomaly 373 is a large wooden crate filled with stones and is 4.30 feet by 4.00 feet, standing 3.80 feet off the lake bottom.

Sonar image of Anomaly 373.

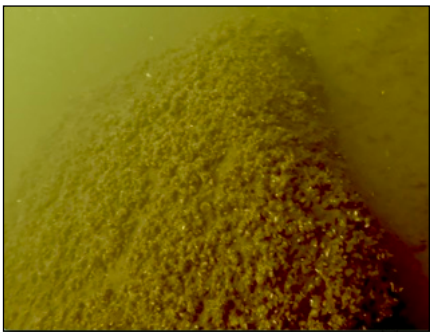
The Rock Box is sitting on the lake bottom at an angle



Rock (Anomaly 1064)

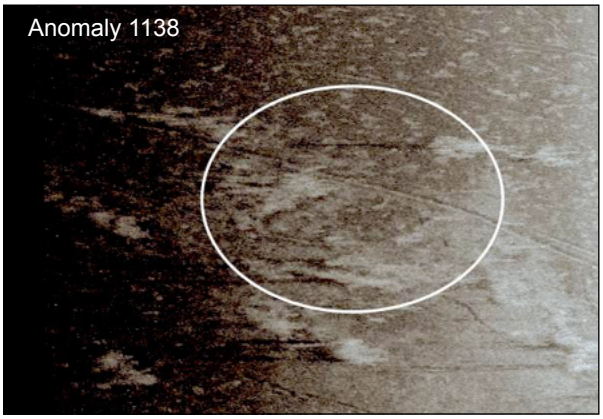
Anomaly 1064 has a distinctive shape that resembles a small wreck. Unfortunately, upon diving on the anomaly, it was identified as a big rock.

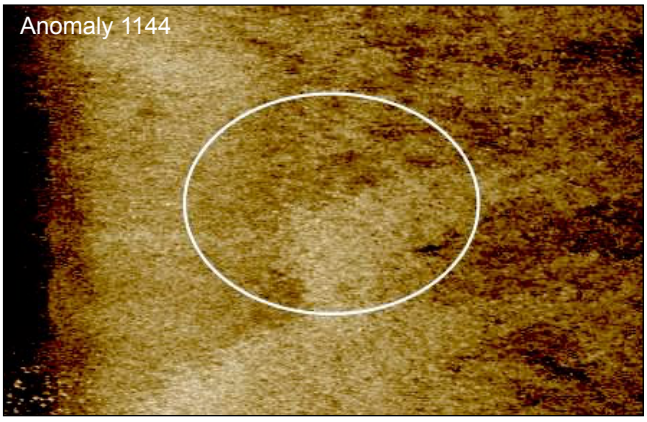
Sonar image and photograph of Anomaly 1064

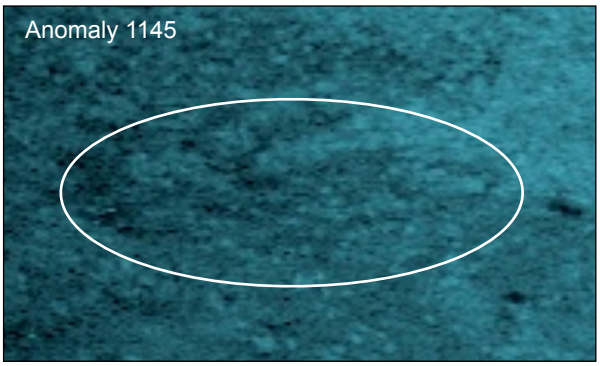


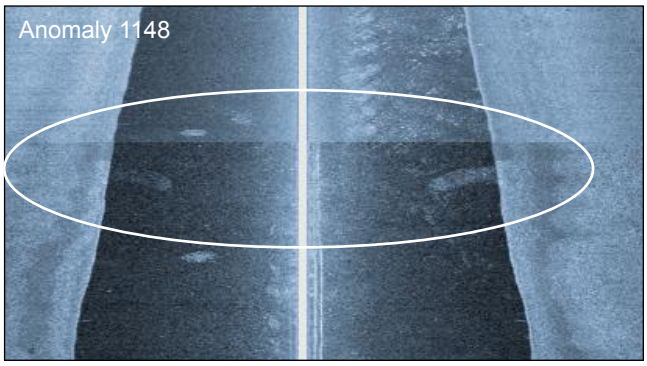
Anomalies 1138, 1144, 1145, 1148

MHM could not locate four anomalies due to thick vegetation in shallow water. The acoustical signatures of these anomalies are strong and will be investigated early or late in the next field season if possible.



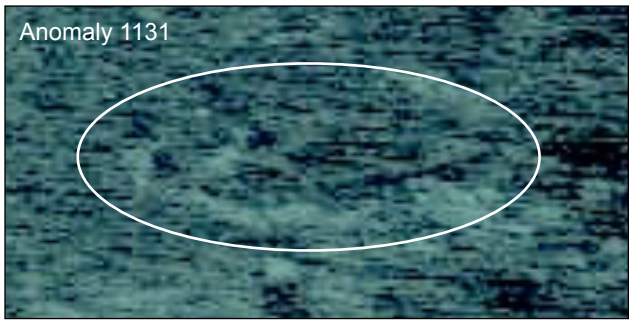


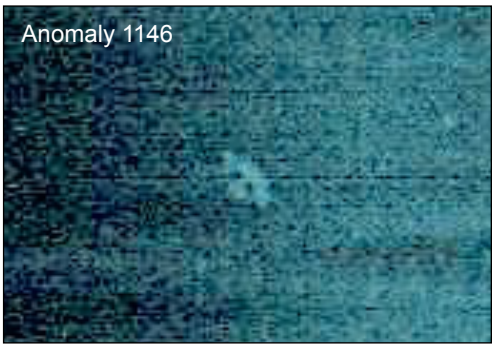




Anomalies 1131, 1146, 1147, 1149

Four anomalies have distinctive acoustical signatures but could not be dove upon due to time constraints. Like the four anomalies that MHM could not locate because of thick weeds, it is hoped that these four targets will be identified during the next field season.





Conclusion

The LMUA-13 Project allowed MHM to identify two anomalies as human-made cultural maritime historical resources and to assess the current - unchanged - condition of the Wayzata Bay Wreck (21-HE-401) and *Priscilla* Wreck (21-HE-404).

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